

A B S T R A C T

BROADCAST SIGNAL CROSS-CONNECT UNIT, IN PARTICULAR FOR
OPTICAL SIGNALS

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The present invention relates to a space cross-connect unit (Z) with N input ports (E_i) and P output ports (S_i) more particularly suitable for packet-switched optical communications networks. The cross-connect unit 10 comprises a broadcast stage comprising at most N signal dividers (A_i) each having an input and C outputs where C is an integer factor of P less than P, each input being connected to one of the N input ports (E_i) so that each of the N dividers (A_i) divides a signal received at one of 15 the N input ports (E_i) into C signals at the C outputs, and a space switching stage comprising at most C space switching modules (B_i); each of the C modules (B_i) has N inputs and P/C outputs, the N inputs are connected to N outputs of the broadcast stage, each of the N outputs 20 comes from a different divider (A_i), and each of the P/C outputs of the C modules (B_i) is connected to a respective one of said P output ports (S_i).

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